

**METHOD AND APPARATUS  
FOR PASSIVELY CALCULATING LATENCY  
FOR A NETWORK APPLIANCE**

**Abstract**

5           A device that passively monitors arriving and departing data packets on one or more  
networks, correlates arriving data packets with departing data packets, and calculates a latency  
estimate based on the confidence of the correlation. The device detects and copies data packets  
arriving at a network device and the data packets departing from the same network device. A  
timestamp is stored for each arriving or departing data packet. Latency across a network device  
10       can be determined based on the timestamps for correlating data packets. Additionally, latency  
across a network device per protocol layer can also be calculated. Varying levels of confidence  
of a latency estimation depend on the operation necessarily performed on the data packet by the  
network device and the protocol level at which correlation between the arriving and departing  
data packets can be achieved.